THE MEDICAL FORTNIGHTLY

Vol. XXXII ST. LOUIS, AUGUST 10, 1907. No. 3

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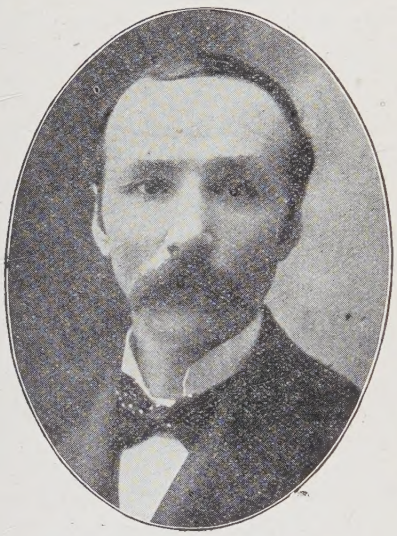
LEADING ARTICLES

THINGS MEDICAL IN TURKEY.

R. G. ECCLES, M. D.

BROOKLYN, N. Y.

MY former communication to the MEDICAL FORTNIGHTLY promised a supplemental one regarding Turkey. Illness and other things have caused a longer delay in keeping that promise than was then expected. Medical men in hearing from such a country are, naturally, anxious to learn of how the medical profession stands there; how numerous the doctors are in relation to population; what kind of work they do; how the people receive them; what their remuneration, and what their facilities for keeping abreast of progressing science. It would be difficult to give any approach to a complete reply to such enquiries, as such statistics as would be necessary to lay bare all the facts are not at all procurable by a mere tourist, and if procurable by others it is with difficulty that they can obtain them. It is quite certain that the number of qualified medical men in relation to population is exceedingly small. For the 6,000,000 of inhabitants in European Turkey there is certainly nothing like 6,000 such men, and for the 17,000,000 in Asiatic Turkey the proportion is even more meagre. The number of hospitals in all of Turkey, that are worthy the name of hospital, could almost be counted by the digits on the hands of one man. There is certainly room enough in Turkey for the excess of good doctors that now crowd the cities of the United States. But when it has been said there is room enough and work enough there, that is as far as can be truthfully stated. The remuneration and appreciation are lacking. The humanitarian demand is great, but the commercial demand small. There is an excellent



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medical college connected with the university at Constantinople, and its graduates are said to be as efficient as those of the best European colleges. A strict examination must be passed by every student, as well as by every one who seeks to practice medicine in Turkey. This examination occurs before the faculty of medicine of the university, a body which contains Turkish, Greek, French, German and American medical men. Every case of malpractice is tried before this same body, as the civil courts have no jurisdiction in such cases. The diploma which they issue is accepted in every state throughout the empire as sufficient evidence of the qualifications of its possessor. There is no need for reciprocal legislation there. Boys who desire to possess a medical diploma require nine

years of constant training in order to obtain it. This training costs them nothing while receiving it, but must be paid for in services to the government, or in cash, after graduation. Service in the army or navy as surgeons, for a definite time, cancels their obligation. Most graduates prefer this to paying for their tuition, as it has the double advantage of wiping out their indebtedness, and giving them an excellent training in the work they will be called upon to perform in civil life. It is a rather singular fact, however, that in spite of such training there is a woeful lack of interest, among Turkish doctors, in surgical work. They leave most work of this kind to be done by foreign doctors so that the latter are usually overburdened with their duties in this line. One American surgeon, Dr. T. S. Carrington, of Constantinople, informed me that while he was acting as surgeon at the Anatolie College Hospital, in Merzifun, he had 300 major operations to perform within seven months.

In connection with the university, in Constantinople, is a well equipped Pasteur Institute. The multitudes of pariah dogs that throng the streets of every town and city in the Turkish dominions might lead one to infer that this institution would be overwhelmed with work, particularly as it is the only one within a territory embracing many thousands of square miles. It was a surprise to learn that this is not the case. It became still more surpising to be informed that every victim of a rabid dog, anwyhere within Turkey, has the privilege of going to Constantinople, at the government's expense, being treated without cost, and being supplied with necessary food during the journey, and while under treatment in the same superliberal terms. Can it be possible that generations of selection has rendered Turkish dogs almost immune to hydrophobia, so that but few of them, in proportion to the total number, are ever afflicted with this disease? The relatively small number of cases would seem to indicate that some such condition must exist. The work being done is certainly highly commendable and reflects great credit upon the Turkish authorities. In some respects as the reader must have seen, medical conditions in Turkey are better than they are in America. Some of my readers might not be ready to commend the paternal care of the government when it supplies the patient treatment, transportation, board and lodging free of charge, but no one can deny that the universal acceptance of a properly attested and worthily gained medical diploma is something of an improvement upon conditions at home. The thorough training and liberal terms on which a Turkish medical education is obtained is of great advantage to ambitious young men, and the method of supplying the same might be copied advantagecusly by our own government.

On first learning the facts here enumerated I began to think that Turkey must be a sadly maligned country, but soon it began to dawn upon me that here might be another case of external illusive splendor with internal, persistent squalor. It was impossible to forget our beautiful vision of Stamboul, Pera and Galatea that was so quickly disillusioned by dirty streets and abject misery. I could not help but think that if Turkey was doing so much, in a medical way, for its people, surely

Lucepere, first native trained nurse in Turkey.

there could be no need for missionary colleges, missionary doctors, and missionary hospitals. If what is being done is but a thin veneering to give an appearance of splendor, where the reality does not exist, then these missionary efforts are justifiable. Questioning a number of the missionaries themselves, it began to appear that this was dangerous ground. Their reticence was eloquence. They told all that was favorable to Turkey, but would answer no pointed questins that might lead them into trouble with the government. Their knowledge in such matters was evidently censored. My Murray's guide book had warned me to slip it into a convenient pocket, away from my luggage, when landing at Constantinople, unless I did not mind having it confiscated. I had been told to keep out of sight all books

upon Turkey that referred to its religion or its politics except in glowing terms of praise. Even so innocent a journal as the Literary Digest that had been sent to me from New York had to be forwarded in care of the British Postoffice, in order to keep its pages from being sullied by black patches where information bearing upon Turkey happened to have been printed. The fact that most of the leading nations, doing business in Turkey have postoffices of their own in the chief

Anatolia Hospital—View in men's ward.

ports, means more than words need tell. Few foreigners ever use the Turkish postoffices, either in sending or receiving mail from abroad and they avoid it, when they can, in correspondence within Turkey. That literature was under perpetual surveillance, by the censors, was notorious. That the lips of teachers, preachers, and physicians were sealed, as a means of avoiding persecution or unnecessary annoyance from Turkish authorities, was a new revelation. Why has Turkey a well equipped hospital and excellent Pasteur Institute in Constantinople with nothing of the kind in the interior or remote cities of the empire? To put such a question to a Turk in Turkey might be almost as dangerous as to ask why a Turkish coin, nominally worth 80 cents, and that passes freely in the marts for 80 cents, will only be credited as worth 68 to 70 cents in the Turkish custom office, Turkish postoffice or other Turkish government office. A Syrian informed me that to ask why the government thus shaves its own money is to endanger oneself of imprisonment. In one of the principal streets of Stamboul, in the busiest part of the day, and in the midst of a busy crowd I saw two officers gag a man, lift him into a carriage and drive off with him to—who knows where? Our dragoman seeing that we were taking interest in this incident hurried us along to get out of what he seemed to think might be danger. The man looked like a peaceful, well-behaved citizen and no one seemed present to accuse him of crime. The hospital connected with a Presbyterian mission in Turkey mysteriously took fire and was burnt to the ground. No one would say that the fire might have been the work of an incendiary, notwithstanding the fact that the time and circumstances made it difficult to surmise any other explanation. In a missionary school, remote where this fire occurred, the matron expressed anxiety about her own buildings, because of the fire referred to. Turkey may want medical colleges, medical hospitals and well trained physicians and surgeons, but aside from what is done in Constantinople, there is but little evidence that she does. As foreigners educate the lower classes into an appreciation of the value of these things the government reluctantly gives a half hearted approval and ostentatiously makes a pretense of being in the lead. Our missionary schools create the first demand. It is related of a missionary who was going into the interior of Turkey in Asia that he met a friend who questioned him regarding where he was going, and what he was going to do. His reply was: "I am going to P— to start two schools." "And why *two* schools?" asked his friend. "Oh! it is this way. Whenever I, or any other missionary, start a mission school, in a new

Little Ahmet, cured at the hospital—A patient for the children's ward.

place, the Turks soon discover that we are winning friends and at once start the second school." It is thus with hospitals and colleges. At present there are but few hospitals in Turkey. No other country needs them more. The number is not likely to increase if it is left to the initiative of the Turk. No other country will have them quicker if the missionaries can secure funds

with which to make the start of a fair number. The Mohammedan authorities will accept such gifts as the various cities in America accept the library funds from Mr. Carnegie. They add 50 per cent to the original investment in order to avoid the estrangement of their people from the faith of their fathers.

There is one thing that Turkey needs more than any other. That is trained nurses. Even the well-to-do people of Turkey are woefully ignorant on things medical. They know practically nothing about the proper care of the sick. They may call in skilled physicians, trained in their own excellent college at Constantinople, or trained abroad in the best institutions of

Anatolia College Hospital, Marsovan, Turkey.

Europe, or America, but after paying for the best of advice there is no one to see that that advice is carried out. It is morally certain that in many instances charms, incantations, or bead prayers to Allah will be substituted. They will carry to the nearest tomb of some great person, or the shrine of some Mohammedan saint, a rag torn from a garment of the afflicted, tie it to some part of the tomb, or a nearby tree, and return to the sick one, expecting quick recovery as the result of this effort. They will have a string of 99 beads, in which each bead bears a different name for Allah. In a whining, singsong tone, they will "tell" these beads with great fervor, particularly as they go over the ones calling God "the healer," "the deliverer from pain," etc. To release the ailing from such superstitious thralldom the trained nurse has become a necessity. In thousands of harems no medical man can be admitted, however pressing the necessity. Multitudes of the best women of Turkey perish miserably under the ignorant care of untrained accoucheurs. When the doctor is called for advice—if he ever is—there is no opportunity to see the patient and no trained nurse to tell him the facts of the case, or to be guided by his directions. Female children of from 10 to 12 years of age get married and they and their sickly progeny are ever the prey of ignorance and superstition. An effort is being started to lessen somewhat this awful state of affairs. There is little hope of Turkey, as a whole, ever permitting male doctors to attend their wives in confinement, or to see these wives unveiled in the harem. They may be permitted to feel their pulses through a screen or examine them in full dress with their veils on, but not otherwise. On the meagre supply of facts thus obtained the diagnosis must be made. By the assistance of a trained nurse this could be improved, the latter supplying the doctor with data he cannot himself obtain. She would likewise be of great service in executing his orders intelligently. The reader may ask: "But why not supply female doctors?" The reply is that they are not procurable, and for many reasons too long to enumerate here, they are not likely to be procurable for a very long time to come. The educated medical man is there. The means of increasing the supply as required is also there. The trained nurse has begun to appear. The material of which to select such nurses is there and the hospitals in which she can be trained are on the increase. The female practitioner will doubtlessly appear in due season, but the trained nurse must be her John the Baptist. The first of these evangels of the East I am, through the kindness of Dr. Carrington, able to show a picture of to FORTNIGHTLY readers. Turkish medical men long for the appearance of more of her kind. Under the guidance of Dr. Carrington a school for trained nurses is being established in Constantinople. The plan for an American Hospital, designed as a training place for nurses in that city has been drawn by A. D. F. Hamlin, of Columbia University, New York. The hospital where most of the doctor's work has been done, where the first trained nurse has been at work, and where he conceived the idea of his new Constantinople hospital, is at Marsovan. Pictures of the interior and exterior are given, and also a picture of a grateful Turkish father and his cured child. For the proposed new institution at Turkey's capital young lady students are already being received, first among these being a Miss Eunice P. Kalfa. They are, of course, selected from among the graduates of the different missionary schools.

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THE EVOLUTION OF INFECTIONS.

A. L. BENEDICT, A. M., M. D.

BUFFALO.

Consultant in Digestive Diseases, City Hospital for Women and Riverside Hospitals; Attendant in same, Mercy Hospital, Buffalo.

SECOND PAPER.

In a prior article, the writer discussed the probable evolution of the bacillus of typhoid from the common colon bacillus. Before discussing the evolution of other germs, it may be well to consider certain general principles underlying the subject.

Although not strictly germane to the subject, the existence of a quite general prejudice against the theory of evolution, suggests the expediency of stating the writer's attitude and of saying a few words regarding the ethics of the evolutionary theory. As is well known, every primitive race which has reached a point of development—let us avoid the word evolution here—sufficient to ask questions as to why and whence things are, has ascribed the original representatives of each kind of living thing to a distinct creative act. Evolution, on the other hand, traces all living things to an ultimate living mass of protoplasm, from which both animals and vegetables are derived. In both cases we have the primary appearance of life unexplained on the precedent of observed reproduction, the comparative fixity of types of life known to the scientist as species, and the actually observed and historically proved occurrence of variations of type, within rather narrow limits, for each species. The most literal Bible student must recognize the unity of the human race or, in other words the evolution of at least five markedly distinct races of the human species and he cannot claim a creation of the bulldog, Holstein cow, etc., separate from that of the general species. When it comes to the question as to whether the wild and the domestic cat or the dog and the wolf were created separately or whether one evolved from the other, it is doubtful how the creationist would answer the question. Certainly, if he grants the evolution of a species from a genus, even when the close relationship is evident to the untrained observer, he has slipped his anchor and he can scarcely deny the evolution of related forms of life of wider and wider groups, from common ancestral forms. On the other hand, the avowed evolutionist reaches a point at which he must postulate the appearance of life de novo. Inconsistently enough the very man who would demand a separate creation for the dog and the wolf would probably declare that the hair-snake—which is one of several kinds of distinct animals, and not a snake at all—evolved without other parentage than a horse hair. In other words, the evolutionist, like the creationist, must postulate the existence of a controlling force which is preternatural. A good many evolutionists like to regard this force as decentralized and utterly lacking in personality but viewed impartially, evolution ascribes to God more power, more patience, more indifference to the flight of time and more controlling, far-sighted creative energy than the theory that evolution can occur only within a species and that each distinct kind of plant and animal must have been separately created. Moreover, the evolutionist recognizes the essentially miraculous, i.e., inexplicable nature of ordinary reproduction, whereas the strict creationist appreciates the divine power only when it is manifested in some bizarre and spectacular manner, as an exception to natural law.

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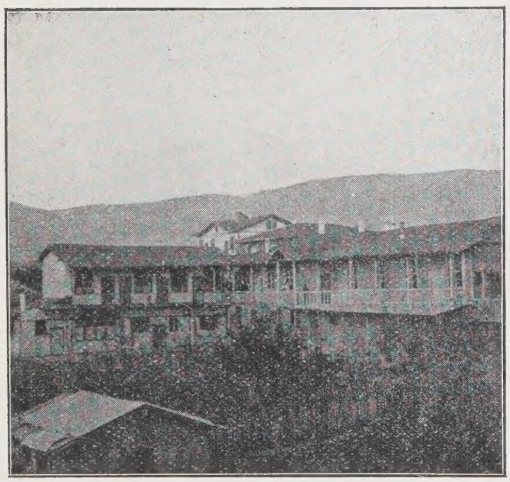

Anatolia College Hospital, Marsovan, Turkey.

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ment and is usualy killed off, either as an individual or after one or two generations, or it returns, after a generation or two, to the normal type, or else it progresses further until a new species is developed. There are millions of abortive evolutions, with destruction of the modified organism or its return to the normal type for every evolution which becomes permanent by reason of the satisfactory adjustment of organism and environment. Such a complete evolution does not differ so much from a distinct creation as at first appears. The development of new species must occur in rather limited locality, and must occur by the inbreeding of a number of closely related organisms. The transitional forms are relatively short lived and few, and the process of evolution of a distinct species, adjusted to a new mode of life and environment must be comparatively brief, scientifically speaking, although possibly extending over many hundred years, in some cases. Thus, it is not to be expected that geologic evidence in the way of fossil missing links (such an expression is a hibernicism) would be afforded.

An important principle in evolution is that a definite species, is a unit as to source. In other words, the same species cannot evolve at two places or times. This principle is, of course, not susceptible of actual proof, but depends upon the mathematic improbability of exactly the same chain of circumstances being duplicated. Of course evolution to meet certain requirements of environment not only may, but usually does follow approximatey the same course. Thus marine mammals, such as the porpoise, and marine saurians, have the external configuration, fins, etc., of fish. Somewhat similar instances are very common, throughout nature so that external appearances are very fallacious guides to classification. We believe that the Judiac theologies, including Mohammedan and Christian creeds of all kinds, agree as to the unity of the human race, that is to say, that they oppose the creation of different races of men at different places or times. Whether there is any theologic analogy extending to the lower animals and plants, is uncertain.

The crucial test as to identity or non-identity of species for sexual animals, is the ability or inability to produce cross fertilization. Thus, given two different animals, the question being whether they are separated by lines of variety or species, if reproduction is possible, it is held that they are varieties of the same species. This rule does not seem to hold good for all sexual plants, and there are even exceptional instances recorded on good authority of reproduction by animals of different species, or, perhaps it should be said that technical nomenclature does not always follow natural lines of separation.* This principle, of course, can not be applied to lower organsims which reproduce a sexually and hence, one of the difficulties of classifying bacteria, protozoa, etc.

A marked change of environment almost inevitably produces a comparatively rapid extinction of certain organisms and an evolution of others, better adapted to the new environment. This principle is important with regard to parasites. One of the most obvious corollaries is that a parasitic organism cannot evolve until after the evolution of its host. Thus, as has been anticipated, a disease-germ that involves only man, or only man spontaneously, must be comparatively recent in the scale.

It often happens that the spread of a given species, is sharply defined by geographic barriers and this is true, both for independent and for parasitic organisms. Contrary to what might be supposed, such limitations are due more to barriers to the migration than to differences of environment. Thus, climatic differences are mainly applicable to macroscopic plants and large animals, and the regions of habitation for each organism, have wide boundary zones. As has been stated, there is practically no parasite of man, whether producing local lesion or genuine, general disease, that cannot survive in any climate, at least in human habitations and their immediate environment, for a considerable period.

The ocean and large mountain ranges are practically the only natural barriers that prevent the spread of a species of either animal or plant life. However, a forest, a cliff, or a considerable stretch of water or land that affords an unsuitable conditions for life, may act locally as an almost impassible barrier. This fact is of practical importance as applied to insects, such as the anopheles, which cannot wander far from a swamp or rise much above its normal altitude. Yet, in a broad sense, such barriers are insufficient to prevent the occasional bearing of adult or larval forms of life over considerable distances, until a suitable environment is again reached. Water falls and rapids limit the ascent, but not the descent of fish and other fresh water animals. A mountain range, to be an effective barrier, must obviously extend well beyond the natural climatic environment of species, or it can be circumvented.

When we find a given form of life widely

*The writer has been assured that the cat and rabbit may breed together to produce a bob-tail cat. He would be glad of definite information on that point, as the assurance was based on experiment, and the informant protested that he was not lying.

distributed, in spite of existing barriers, we may conclude either that it antedates the barriers in question, or that either as an adult, in some larval stage, or as a seed or spore, it is readily capable of being borne long distances in the air or water, without destruction. It is exceedingly doubtful whether any existing species antedate such barriers as separate continents, on account of the great antiquity of the separation, excepting that the separation of North America and Asia is comparatively recent in point of geologic time and is, indeed, not complete with reference to the occasional safe passage of various land plants and animals, including primitive man. Generally speaking, when barriers of great antiquity exist, we expect to find similar genera in the separated areas, but different species. Still, many circumstances such as the impossibility of stating whether a microscopic or inconspicuous species is indigenous, or has been introduced by early commerce, the question as to biologic classification, etc., complicate this subject.

On the whole we are struck with the fact that often species to which a region is admirably adapted have been excluded from this region until the very recent and purely artificial transfer by human agency. For instance Indian corn, potatoes, cacti and tobacco indigenous to America have been domesticated in the eastern continent and have grown abundantly within the last three or four hundred years. Conversely none of the ordinary cereals excepting Indian corn and none of the useful domestic animals were indigenous to the Western continent. Yet they have been easily domesticated and the horses, escaping from the early Spanish invaders have thrived in the wild state to such a degree as to suggest their being indigenous and artists of fair intelligence have depicted the aboriginal Indian mounted on horses.

Curiously and inexplicably the precursor of the useful domestic animals became extinct in the Western continent before the advent of man or in the case of the elephant-like mammals probably shortly afterward. In the Andes an animal related to the camels, the huanaco, became domesticated as the llama, a beast solely useful for carrying small burdens. Another closely related sheep-like mammal the vicuna became domesticated in the same region as the alpaca which was used mainly as a wool-yielding animal. The aborigines of America, generally, had dogs and turkeys. Geese and rabbits were domesticated in the central parts of the continent. Otherwise, there were neither domesticated animals nor those capable of domestication. Without draft animals, agriculture could be carried on only to a slight degree; all dairy industries were out of the question, not even the llama and alpaca yielding milk in captivity to man; the raising of animals in captivity for their flesh was almost out of the question, except with regard to the geese and rabbits of Mexico and Peru, and the turkeys of the Cliff Dwellers since the llama and alpaca were too valuable for this purpose and since the turkey is notoriously difficult to raise unless circumstances are exceptionally favorable.

Thus, excepting in tropical and subtropical America, including in the latter, the fertile and comparatively warm Mound Builder region, and the unique Cliff Dweller and Pueblo region, the American aborigines were forced to a savage and comparatively nomadic life. This fact has a very direct bearing upon aboriginal parasitology in a double way. First, the Indians were free from such germ-diseases as originate in and thrive among the useful, domestic animals; secondly, they were free from such as depend upon the sanitary and hygienic evils of dense population and civilized existence. Some phases of the latter consideration may not be immediately apparent; imagine the entire lack of close housing, of concentration of human and animal excrement, of saprophytic and specific germ development in cheese, milk, etc., and stall or sty-fed meat, of the predisposition to infection on account of alcohol, tea, coffee and tobacco—even the last being used in moderation by most tribes—of habits of life tending to sexual excess and social degradation, of the possibility of rearing delicate children and prolonging the life of the helpless, of maintaining fomites of disease in dry, dark and artificially heated apartments. All these details imply, first, the actual lack of many disease germs, secondly, a good general resistance against such diseases as are dependent upon the receptivity of the organism; thirdly, a greatly lessened probability of infection by the three chief routes—the alimentary canal, the respiratory passages and the genital organs. It must be borne in mind that the habits of life of the American aborigines tended to a rather low birth rate and to a considerable infant mortality by exposure and traumatism, and on account of lack of easily digested food to supplant or succeed the maternal milk.

Perhaps on account of the lack of a large and concentrated infant population, the following germ diseases failed to develop in aboriginal America: Measles, rubella, scarlatina, variola, varicella, pertussis, mumps. The lack of concentrated population generally—with some exceptions which, at any

rate, did not cause such evolution—prevented the development of typhoid, cholera and typhus. The lack of close association with animals excluded anthrax, equinia and malignant edema and probably also, hydrophobia and tetanus, although the former cannot be definitely excluded, either theoretically, since dogs were abundant, nor by positive bacteriologic evidence to the contrary. If tetanus, as there is some reason to believe, is an essentially equine disease, the bacillus originating in the intestine of the horse, it certainly could not have been present in aboriginal America. Tuberculosis is probably essentially a bovine disease, although so-called tubercle bacilli, more or less distinct as to variety or species —or genus?—occur even in birds and cold-blooded vertebrates. Tuberculosis is also, par excellence, the disease depending upon a weakened state of the organism and upon close housing. Thus, it was absent in primitive America. The absence of swine implied the absence of trichiniasis. For one reason or another, leprosy, actinomycosis and various diseases indigenous to Asia and eastern or central portions of the eastern continent, such as Malta fever, dengue, trypanosomiasis, filariasis, bubonic plague, Japanese flood fever, etc., were absent. With regard to diphtheria, pneumonia, erysipelas, influenza, and some others, we are in doubt, largely because the specific nature of such diseases is not to be positively inferred from the symptomatology. Syphilis is also in doubt. Many mound builder bones strongly suggest syphilitic osteitis but, obviously a positive diangosis, for or against syphilis cannot be made on such evidence Then, too, some of the aboriginal Mexican literature is said to describe syphilis pretty accurately, but the original hieroglyphs are either missing or cannot be translated with certainty. The Indians suffered from "rheumatism," but the confusion of the specific acute fever with metabolic and traumatic affections, renders it impossible to state what this rheumatism really was.

We can state positively that aboriginal America had malaria, non-specific sepsis and ankylostomiasis, at least in the southeastern part of North America. It also had yellow fever as an indigenous disease of man and probably the protozoon of Texas fever, not involving man and of chief importance as a bovine disease. Rocky Mountain fever and verruga Peruviana, if proved to be specific infections, must also be charged to America. Certain ectozoa and entozoa were also probably indigenous. Intestinal bacterial disease was also comparatively common, but whether either amebic or bacillar dysentery existed, is not clearly established, and probably never will be, on account of the impossibility of distinguishing from ordinary colon infection, irritative diarrhea, etc. In short, the only disease of importance, for the world at large, which is charged to America, is gonorrhea. Thus is said to have been introduced into Europe from the West Indies by Columbus's sailors. If this is true, it is remarkable that the epoch-making achievement in commercial exploration is brought into close analogy, so far as disease is concerned, with the outburst of religious fervor, which led to the Crusades, and which not only had so great an influence upon the social, religious and political history of Europe, but which gave syphilis to civilization. However, it is somewhat doubtful whether gonorrhea originated in America, and at any rate, it was unknown upon the American *continent*, until the advent of Europeans. Venereal disease of some sort was certainly known to the Greeks and Romans, and some of the allusions strongly suggest gonorrhea, others, equally strongly, syphilis. The narrative of Abraham and Sarah in Genesis also points to a very early existence of gonorrhea. The very pretty woman, about whom Pharaoh's officers "raved," who went to live at the court, on whose account Abraham was enriched with all sorts of domestic animals and other wealth, on whose account a "plague" fell upon the house of Pharaoh—not on the people, as in the case of the latter plagues of the time of Moses—who was sterile until her old age, although Abraham had one child by her as well as by her hand-maid whom she gave to Abraham, and several by a subsequent wife, and finally, the ritualistic institution of circumcision, all suggest venereal disease and probably gonorrhea.

In general, just as macroscopic plants and animals, indigneous to one environment and unknown to another until artificially introduced into it, and then thriving even better than in the native one, are historically known, so parasitic germs of both kingdoms find the right pabulum in races of men and domestic animals to which they had previously been strangers. The various exanthemata have killed almost entire villages of Indians. The white man, in assuming his burden of the lands of savages and barbarians, has also assumed his infections and has shared his own with them. Indeed, the impression is gaining ground that there is no such thing as racial immunity, and that the absence of a particular infection among a particular race is due to the germ having been evolved after the splitting off of that race from the parent stock, perhaps many generations of races removed, and while an apparent partial race insusceptibility is ac-

counted for solely on the ground of habits of life favoring resistance or rendering means of infection unlikely.

Regarding the evolution of disease germs from free-existing micro-organisms, the probable source of the typhoid bacillus from the colon bacillus has been mentioned. The similarity of human to bovine tuberculosis, and the similar morphology and staining peculiarities of the tubercle and the hay bacillus, strongly suggest that the latter, repeatedly introduced into bovines with their fodder, evolved into a parasite, while the pretty well demonstrated differences between the bovine and the human disease and the apparent origin of human tuberculosis among pastoral eastern races, suggest a further, partial evolution into the human variety.

The exanthemata seem to have originated somewhere about the Mediterranean and not to have involved Japan, America and southern Africa till quite recently. Not only superficial clinical resemblances of symptomatology, but recent claims of Mallory and others, as to the presence of protozoa in scarlet fever, and the rest, similar to those of smallpox, suggest that this group of diseases may have evolved from a common stock. Only variola is shared by the lower animals and this, only in a mild form, as vaccinia, grease of horses, sheep pox, etc. Whether the variola protozoan originated in man or in the lower animals, is doubtful. Possibly the other exanthemata may involve the lower animals or may be made to do so, if so, and the animal disease corresponded in mildness to vaccinia, very practical results in the way of vaccination against the exanthemata generally might reasonably be expected.

NURSES FOR THE PUBLIC SCHOOLS.—The Boston school board has voted $10,000 to employ 22 nurses in the public schools until January 1, 1908. After that the annual expenditure will be about $25,000. The nurses will be stationed in the various school districts to keep close watch on the eyesight and general health of the children and to prevent epidemics of contagious diseases.

MORE MILK INSPECTORS.—The Department of Health of New York City has asked for $175,000 for the employment of one hundred additional milk inspectors and four more supervising inspectors until the end of the year. The milk supply of this city comes from between 30,000 and 40,000 farms in six states and from 600 to 700 creameries which gather the milk from the farms. Hence the need of a greater working force.

MEDICAL MISCELLANY

THE government is erecting a leprosarium in the Hawaiian Islands. The site selected for the institution is the Molokai settlement. Extensive experiments will be conducted after the completion of the structure, the plan being to utilize anthropoid apes in the work, thereby insuring more accuracy in the determinaion of the relative value of different sera.

DEATH OF SIR WILLIAM BROADBENT.—Dr. Sir William Henry Broadbent, physician in ordinary to the King and Prince of Wales and consulting physician to St. Mary's Hospital, Paddington, and other London hospitals, died on July 10 at the age of 72 years. Dr. Broadbent was a prominent London consultant and was well known for his works on

SIR WILLIAM BROADBENT.

diseases of the heart. He was at various times president of the Harveian Society, Medical Society of London, Clinical Society and Neurological Society. He was a Knight Commander of the Royal Victorian Order and a Commander of the Legion of Honor, and held several honorary university degrees.

DUKE CARL THEODORE, M. D.—The only royal doctor in Europe, according to the Tribune, is Duke Carl Theodore of Bavaria. Few German princes have had a more romantic career than Duke Carl Theodore. He recently completed, with his wife as his assistant, his five thousandth operation for cataract. Poor people flock to his hospital, where they are treated free, the Duke asking payment only from those who can easily afford it. He it was who successfully treated the Kaiser when, eight years ago, he was temporarily blinded by a swinging rope when cruising on the Hohenzollern in the North Sea.

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OFFICIAL TRANSACTIONS.

A BRIEF REPORT OF A CASE OF TYPHOID FEVER WITH PERFORATION AND HEMORRHAGE, WITH PRESENTATION OF SPECIMEN.*

JULES F. MENESTRINA, M. D.

ST. LOUIS, MO.

On March 10th I was called to attend a young woman. I found her very ill with a well defined case of typhoid fever. I judged her to be well along the second week of the attack, by the typical clinical symptoms present at that stage, such as delirium, petechial eruption, tympanitic distension of the ileo-cecum, a pathetic look, epistaxis, diarrhea, etc. Widal test was positive. She was admitted to the Lutheran Hospital the same day. At her arrival the temperature was 105 degrees F., pulse 130. For the next two days she improved somewhat till the 12th of March when she had a severe hemorrhage, followed in few hours by nine more. She stood the loss fairly well and for four days following seemed much improved. No fresh hemorrhage occurred till March 17th, when she had several more and very profuse. She was this time profoundly shocked, pulse scarcely perceptible. Perforation took place on the morning of the 19th. Without delay seeing the desperate turn of the case, as a final resort, and after a hasty consultation it was thought best to operate on her, being so warranted by favorable reports that occasionally we hear from operators in different parts of the world. She was prepared for laparotomy. An incision was quickly made in the median line. A serous exudate was found in the peritoneal cavity. Small intestine was found distended with large quantity of blood. The various Peyer's patches were involved in typhoidal inflammation. Those nearest the cecum were mostly involved. The ulcers nearest the cecum were all perforated, and the gut covered with fibrin. On account of the number of the ulcerations and of the constant hemorrhage still going on it was decided best to resect two feet of intestines by making an end to end anastomosis with Murphy's button. The whole procedure was quickly done, but the loss of blood had been so great and shock so severe that patient died before abdominal suturing was finished.

The lesson derived in this desperate conditions is that repeated profuse intestinal hemorrhage are usually a precursor of perforation, and in my opinion really a surgical condition, and I venture to say that the procedure employed in this case, however heroic it was was fully warranted, and my only regret is that it was not done when repeated and profuse hemorrhages occurred after the initial ones. In the case of perforation taking place, the numerous successful results reported from various surgeons stamp this a recognized surgical necessity. Temporizing is always fatal.

DISCUSSION.

Dr. Rassieur.—The patient was in very bad condition at the time of operation. The pulse was so bad that the anesthetist at times could not tell whether there was a pulse there or not. But the woman was bleeding to death and something had to be done. The ulcers were of increasing severity as they approached the ileo-cecal valve, and the last was necrotic. We did not know where the hemorrhage was coming from, and we could not sew her up and let her bleed. The only surgical thing to do was to remove the perforation and stop the hemorrhage at one blow, and that could be done only by removing that section of the intestine, notwithstanding the fact that Dr. Menestrina and I were both aware that previously all patients had died following such an operation. But this was the only chance.

Dr. Smith.—I have never seen a patient get well where there was perforation and hemorrhage, and I have no doubt this patient would have died whether operated upon or not. It is a question whether it would not have been better to make an incision and drain the peritoneum, or it might have been better to make an artificial anus. I would like to know how long it took to make this end-to end anastomosis.

*Read at the meeting of March 21, 1907.

Dr. Menestrina.—Not over twenty minutes.

Dr. Smith.—Of course in trying to save such a patient almost moribund everything depends upon getting the least possible shock. I understand that Dr. Menestrina had some misgivings as to whether he should have operated at the first hemorrhage. Would you advise operation on the evidence of hemorrhage alone before the evidence of perforation?

Dr. Menestrina.—Not on the strength of one or two hemorrhages alone.

Dr. Smith.—I do not think we can ever construe hemorrhage as an indication for operative interference. Of course if we can make out a perforation the thing to do is to operate. A patient may have many very serious hemorrhages and get well, so hemorrhage alone could not be made an indication for surgical interference, but perforation undoubtedly is, for unless something is done surgically the patient will unquestionably die. The chances in hemorrhage are much better under medical treatment; absolute rest, opium, ice bags, saline transfusion and other means as the indications for them arise.

Dr. Rassieur.—About the advisability of merely making an artificial anus; one of these places was perforated, another was about to perforate and you could not tell how soon the others would perforate. Now, how much good would an artificial anus do if immediately afterward another of these perforations occurred? I have seen patients who died of typhoid in whom there were two or three perforations. There was no tendency for the peritonitis to remain localized in this case.

Dr. Menestrina.—These cases cause us much worry, for it is always a question whether they should be treated medically or surgically. I would not condemn a patient to operation because of the first hemorrhage, but in case of serous and profuse hemorrhages and perforation I should certainly advise it.

A CASE OF SPLENECTOMY.

JEROME E. COOK, M. D.

ST. LOUIS.

A preliminary report of this patient was made before the society by Dr. Kirchner in November, 1905. A few weeks previous to this, on October 12, he had his spleen removed on account of a traumatic rupture. While walking through some freight cars, in stepping from one to another standing on an adjacent track, he missed his footing and fell between them, a distance of five or six feet, striking his side as he fell. He felt some pain but was able to walk home, and did not think the injury serious. The pain in the abdomen became severe, and he came to the city hospital on the next day, about thirty hours after receiving the injury, walking into the hospital. He was soon placed on the operating-table, the abdomen opened and explored by Dr. Wm. J. Doyle. The pelvis was found full of blood, and upon seeking for the cause of this the spleen was found to be ruptured, and was removed. This enlarged spleen, measuring 8 x 5 x 2 inches was presented by Dr. Kirchner in 1905. The patient gave a history of having had a severe rigor, followd by high fever and sweating a week previous, and of taking quinine since that time.

Since the operation the patient's blood has been examined at longer or shorter intervals up to the present time, and this paper is chiefly intended to put before you the results of these examinations. The first six examinations were made by Dr. Walter Fischel, the subsequent ones by myself. I wish to call your attention to a few interesting features in the appended tables.

From October 25 to November 5th the red blood cells steadily increased from 2,410,000 to 3,590,000, the hemoglobin showing a proportionate rise, the leucocytes varying between 12,000 and 19,000. The leucocyte count made just before the operation was 8,900. On November 5th the patient had a chill and the malarial organism was found in the blood in considerable number. It is worthy of remark that although the blood had been examined for many days previous, no organism had been noticed. There was a slight drop in red cells following the chill, but this was soon compensated, so that on November 15th the count was 3,580,000. The patient left the hospital and a red count was not again made until July 15th, 1906, when the rather high count of 6,150,000 was registered. Another count, January 13, 1907, showed 6,000,000 red cells. Another count, March 17th, 1907. showed 5,300,000. Study of the differential counts is also very interesting, though somewhat more uncertain in interpretation, since there was an actual leucocytosis in most of the counts, dependents to some extent, perhaps, upon wound infection.

First count made November 5, 1905, despite a leucocyte count of 15,000, showed about normal relative proportions. From this time to May 5, 1906, the polynuclears

had dropped to 43%, with a compensating increase in the mononuclears; and the findings have remained at about this point since, if we except the count on January 13, 1907, when the patient had a leucocytosis of 15,000, due possibly to an unhealed gunshot wound of the foot. The lowest polynuclear per cent recorded was the last made, on March 17th, of 42%, with a normal leucocyte count of 8,000.

The hemoglobin estimates have not been taken with regularity, but on March 17th, 1907, showed 90% with the Fleischl and Dare instruments.

Rautenberg (Muench. Med. Wochen., 1903) gives the blood findings from a case of splenectomy that had been operated upon for a primary sarcoma of the spleen, the disease recurring in about a half year. The red cell varied from 4,300,000 to 4,900,000 in five months. The white cells remained within normal limits. The polynuclear cells registered 92.3% two days after operation, but soon decreased markedly, and five months after the operation registered 61% and the mononuclear cells 29%, with 8% of eosinophiles.

In interpreting the blood findings in these cases, I would direct your attention to some recent work of Emerson (Johns Hopkins Bulletin, Jan., 1907—The Blood of Normal Young Adults), in which the red cells were found to range in healthy young adults from 4,500,000 to 6,800,000. The average for 150 individuals is 5,400,000. The counts were remarkably constant from day to day, but for long periods some of them showed considerable variation.

O. Riegner (Berliner Klin. Wochen., 1893, Nr. 8) performed the first splenectomy for traumatic rupture in a boy of 14. About four weeks later the left thigh was amputated for gangrene, and a study of the bone marrow was thus made possible. There was found an active proliferation in the spongy tissue of the bone, with great increase in the number of capillaries and a widening of the lumen of the Haversian canals, with a partial absorption of the bone about the fast growing cartilaginous ends. It is possible that this activity was excited by the hemorrhage incident upon the rupture, and not by the vicarious function of the red marrow. Immediately after the operation the red cells numbered 2,500,000, and the white 25,000. Eight weeks later the red cells numbered 4,700,000 white 25,000. At first the polynuclears predominated, after a month the lymphocytes were in a majority, but after seven months the polynuclears were again in preponderance.

As to the physiology of the spleen we are still almost totally ignorant. Bizzozero and Torre (Virchow Archiv. XCV, 1884) decided that in the lower vertebrates (fishes and reptiles) the red cells originated in the spleen. Williams (American Medicine, 1903) examined the freshly remained spleens of the hog and ox, but never obtained what he considered a human spleen suitable for examination. He found that about 3% of the red blood cells in the spleen contained very faintly staining nuclei with mitotic figures. Other authors believe that in the spleen the white blood cells are transformed into the red. Still others, having seen in the spleen large cells, which contained one or several red blood cells, considered these to be phagocytes and believed that red cells are destroyed in the spleen, and as further basis for his claim they bring forward the observation that the iron content of the spleen is greater than can be accounted for by the contained blood.

A uric acid forming function has also been attributed to the spleen by some.

The fact that the spleen increases in size after a meal suggests a relation to the digestive processes. To it has been attributed the production of "something" which carried in the blood to the pancreas, converts trypsinogen into trypsin. The experiments upon which this statement was based have not been confirmed by other observers. Such cases as the one which we here present offer special advantages in working upon the subject, and we still hope to conduct a series of observations with a view to determining a digestive function of the spleen.

Mr. J. M., age 22.

Date	Erythrocytes	Leucocytes	Hemoglobin
10-12 05..	——— (before operation)	8,900	—
10-25 05..	2,410,000	19,500	37%
10-26-05..	2,770,000	19,500	38%
10-27 05..	2,840,000	21,000	36%
10-29-05..	2,880,000	19,000	—
10-30-05..	2,890,000	18,400	38%
10-31-05..	3,000,000	18,000	40%
11- 1-05..	3,140,000	18,000	42%
11- 2-05..	3,210,000	12,000	45%
11- 3 05..	———	12,400	45%
11- 4-05..	3,590,000	14,600	50%
11- 5-05..	———	15,400	50%*
11- 6-05..	2,950,000	10,900	53%
11- 7-05..	2,800,000	11,000	55%
11- 8-05..	———	9,800	—
11- 9-05..	———	11,500	55%
11-10 05..	3,250,000	13,300	55%
11-11-05..	3,380,000	12,600	55%
10-12-05..	———	14,200	60%

*On this date the patient had a chill, followed by high fever, and the malarial organism was found in the blood (stained specimen) in considerable numbers. Quinine therapy was instituted.

Date	Erythrocytes	Leucocytes	Hemoglobin
11-13-05..	3,280,000	12,500	62%
11-14-05..	3,340,000	11,400	65%
11-15-05..	3,580,000	12,900	65%¶
1-14 06..	————	11,000	—
5- 6-06..	————	10,800	—
7-15 06..	6,150,000	9,400	—
11-13-06..	————	12,600	— †
1-13-07..	6,000,000	15,100	90%‡
3-17-07..	5,300,000	8,600	90%

Differential count 400 to 1000.

Date	11-7-05	11-8	11-12	12-1	5-6-06	7-15	11-13	1-13-07	3-17
	per ct	per ct	per ct	per ct	per ct	per ct	per ct	per ct	per ct
Polynuclear	75	66	71	58	43	55	51	73	42
Mononuclear	23	29	22	33	51	37	42	25	55
Eosinophiles	1	2	5	7	4	7	6	1	2
Basophiles	1	3	2	2	2	1	1	1	1

On March 17, 1907, the patient seems to be in quite good physical condition, despite the fact that he is drinking constantly to excess. He is gaining weight. There are some large lymphatics in the axillae, in groin, the cervical lymphatics are not enlarged. There is a post-operative ventral hernia, which does not seem to inconvenience him, for he is able to do uninterrupted labor as a teamster. His lungs show nothing abnormal, heart sounds are a little muffled, are regular, show no murmurs, examination of the abdomen is negative, no point of tenderness, patient has no digestive disturbances, the appetite is good and the bowels regular.

4133 Laclede Ave.

DISCUSSION.

Dr. Cook.—I did not see the patient until about two or three weeks after the operation, being in the laboratory service at the time, and was assigned to do some little work on his blood. I did not notice any change of the thyroid at the time, as he was not my patient except as to the blood. In the records he did not show any signs of thyroidism. It has been noticed in some cases in the literature, while in others no such changes have been found. I believe in the first observations made on the subject the thyroid and spleen were supposed to be related one on the other, that is, if the spleen were extirpated, the thyroid would take on a vicarious function. The conclusion was reached on the basis of numerous experiments where the spleen alone was removed. They did well, but when both spleen and thyroid were removed they died. Traumatic ruptures do show favorable results, and not only those that are operated on early; this patient was not operated until thirty-six hours after the injury, and in the meantime walking around, and walked into the hospital, so that it seems that cases of traumatic rupture are not especially serious per se.

Dr. Deutsch.—It is not in these traumatic injuries to the spleen that the worst results follow. It is in the cases of leukemia that the patients do badly, because there is hemorrhage with no means of stopping it. I would like to ask if there was any change in the thyroid system.

Dr. Kirchner.—I have just discharged a case of injury to the spleen, which would have been easy to remove, but I decided to suture. The operation was successful and the patient made a complete recovery. In this case the spleen was wrapped in the omentum with the hope of forming a capsule for the organ. This procedure suggested itself to me from an experience I had some time previous. The patient had received an injury to the left side, and a diagnosis of rupture of the spleen was made, but on account of shock he was not operated on at once. He subsequently developed symptoms of secondary hemorrhage, and when the abdomen was explored it was found filled with blood. The clot, which had formed in the splenic fossa, had only partially organized, became softened, and hemorrhage was thus re-established. The necessity for encapsulating the spleen was thus made apparent.

Dr. Sullivan reported a case of echinococcus cyst, and presented patient, with specimens of membrane.

DISCUSSION.

Dr. Tiedemann.—The tenia echinococcus does not exist in the United States. It is found in many parts of the world, northern Europe, Iceland and Australia. It inhabits the small intestines of the dog, wolves, and other members of the dog family. It is exceedingly minute, so it could be easily overlooked. It is composed of a scolex or head, and other segments. The head is pear-shaped, and has a button-like prominence, surrounded by hooklets. The first segment is small, so is the second. The last is very large. In the last segment are contained many ova, which are fertilized, as both male and female organs are present. The ova leave the intestine of the dog and are conveyed into the intestinal canal of man and animals. When the ovum gets into the intestine, the shell is dissolved, and the embryo is set free. The embryo is very small,

† Patient was shot in the foot about a month ago and was brought to the hospital. The wound became infected, but is now almost clean. Is otherwise feeling well.
‡ Foot not yet entirely healed.
¶ Left hospital.

so that it can readily travel through the blood vessels. It is provided with six booklets. It gets into the blood and naturally lodges in the liver. It may pass through, however, and get into the heart or lung. Most cases in the lungs are secondary. When the embryo is lodged in the liver, it is converted into a cyst-like body, the wall being composed of a double layer, an external and an internal one. Then brood capsules are formed, and within the brood capsules eight, ten or a dozen scolices may be formed. Daughter cysts are formed from primary cysts. How this occurs is not well known. The daughter cysts may give rise to tertiary cysts, grand-daughter cysts, so that thousands of daughter cysts may be produced. A cyst may remain sterile, but in most instances daughter cysts and scolices are developed. The effects of the presence of such a cyst depend upon its size and location. The sizes differ very much. The growth is slow and it is months before scolices are developed. The cyst may die early and no symptoms be produced. It is possible for it to enlarge, so that enormous cysts may be formed. It is stated they may get to weigh from twenty to thirty pounds, although usually they are, in size, about as large as a child's head to the size of a man's head. The parasite may die and the contents of the cyst are gradually absorbed. The serious consequences are produced by pressure, for instance, in cases involving the liver, pressure on the bile ducts, also when the pressure is on the heart and lung, grave consequences may follow. Rupture may occur. It may rupture into the peritoneum, giving rise to the formation of new cysts; it frequently occurs in the pleural cavity. The right pleural cavity is most frequently invaded, and it may happen that the lung tissues are opened, and the contents expectorated through the bronchial tubes. The most serious consequences are rupture into a blood vessel. This may be into the vena cava, which would be quickly fatal. The cysts, suppurate as a result of injury or of spontaneous suppuration. There are two or three kinds of these echinococcus cysts, one in which the daughter cysts are not formed inside, but outside, in which cystic growth makes its way into the surrounding tissue. This form occurs in animals, the ox and sheep, from which the dog gets its infection. There is another form which was for a long time often called gelatinous carcinoma. In this the whole mass is surrounded by scar tissue; it is very dense and thick, so that a solid tumor is produced. The membrane which has been described is characteristic for this cyst. Anyone who has seen the membranes will not be likely to mistake them for anything else. They are so thin and delicate and gelatinous that they can hardly be mistaken for fibrinous membranes. That mistake, however, is frequently made. The disease is so rare that we hardly think of it. Under the microscope there is no structure to the membrane. There are no cells present, as in a fibrinous exudate, so it is easy to see they must be echinococcus membranes. I have here a specimen under the microscope. The pieces coughed up are large, which is characteristic. You could never get so large a membrane from fibrinous exudate from any case. They may be four, five or six inches long, and keep on coming up. When once you have seen them, you cannot mistake them for anything else. Usually, or at least frequently, daughter cysts are coughed up, which does not seem to have been the case here. There were no small cysts present.

Dr. Homan.—Will some one please explain why the hemorrhage continues; that is, how it is produced?

Dr. Tiedemann.—Of course there is a cavity in the lung; just as soon as the cyst ruptures into a bronchus an infection occurs through the surrounding tissues, so he must have a spreading cavity there and the hemorrhage is due to the inflammatory process which is still present there. The membrane is still adherent and is coming very slowly. He has been coughing it up for six months. Secondly, there is a suppurative process about the cyst. Hemorrhage is always present where lung cysts are coughed out.

Dr. Luedeking.—I request that Dr. Weber give a statement of the physical condition of the case at the time it came under his charge. Dr. Sullivan just took charge recently.

Dr. Weber.—I do not remember the exact findings, but will describe them as closely as I remember them. I have not had him in my charge since October. His temperature was 99½ with complete dulness from the second rib to the fifth along the anterior axillary line, and from the third to the seventh posterior axillary line from the second down to the eleventh midaxillary line on right side. The chest on one side was quiet; there was also bronchial breathing. Complete dulness from apex down to fourth rib on left side, bronchial breathing, some crepitant rales. The one thing that lead to the diagnosis was hemoptysis, club finger, etc., which was all we had until he began coughing up membranes. We had in mind at that time the possibility of fibrous tuberculosis of the

lung, but later thought of the echinococcus cyst. Since that time the patient has cleared up and gained about ten pounds in weight. The physical signs have practically disappeared since that time.

Dr. Meisenbach.—There is very little that can be added. In Berlin we had a patient in Prof. Senator's clinic who gave a history of coughing up a small cyst in a severe paroxysm of coughing. I have seen a number of cases. In this case the absence of the hooklets and scolices leads us either to think they have been overlooked in the examination, or that we are dealing with a sterile cyst. If the examination has overlooked the hooklets and daughter cysts, there is a possibility of daughter cyst formation and continued infection. However, if there are to be found no hooklets or scolices, the indications for surgical operation are not present, because the lung will take care of itself, the cyst having ruptured. With regard to the club fingers, it seems to me that the cause of the club fingers might be contribued to by a cardiac lesion (hypertrophy and valvular), but I would not make a positive statement regarding the valvular lesion here. The question of where to attack the lung in this case would have been a very difficult one with an effusion on one side and decided abnormality in the other lung. Fortunately, we do not have many of these cases where both lungs show disease conditions. It was Sauerbruck and Petersen who developed the caskets for operating on the lungs in order to avoid the inevitable pneumothorax incident to intrathoracic operations.

Dr. Sullivan.—The only thing I would further add is that my reason for thinking this was primarily of the lung is that the first symptom he noted was a pain in the left upper chest and in the left scapular region. This subsided finally, after a few months, and the recrudescence of the trouble started a year ago with pain once more in the chest. He did not complain much of the right side. I did not see it at the time, but my idea was it was tuberculous pleurisy.

Dr. Deutsch.—If the pathology and diagnosis of echinococcus cyst of the lung is a difficult one you will readily understand that the surgery of the disease is still more difficult. On the diagnosis and pathological findings of the internist will depend the surgeon's ability to combat the disease. Unfortunately, as in this case, the physical findings of the chest in these cases is so imperfect that the internist can help little in showing the surgeon in locating the cyst in the lung. When it has been discovered the prognosis from the surgical standpoint has not been very unfavorable. Couffre reports 61 cases operated on with 51 recoveries. The question of attack depends entirely upon the diagnosis which has been arrived at. In the liver they have been frequently operated on successfully. In Berlin I saw a number of them operated on. They can be shelled out of the liver with a curette easily. Aside from the bleeding which resulted from the curettement no untoward symptoms occurred. They made good recoveries. The choice of operation in these operations is important. Von Miculick devised a cabinet for these operations in which the patient was placed with his head exposed so that the air pressure could be regulated, but he died just about the time he was completing his experiments. A disease which might be confounded with this disease would be malignant intra-thoracic growth, taking for granted the cyst wall has not been coughed up. The choice of the anesthetic is important. The position is also important as the patient must be so placed that the expectoration will not run into the bronchi and strangle the patient and also so that the fluid will not run over the healthy lung tissue and cause another infection. The plastic operation is the operation of choice. The tapping operation has been practically given up in these cases as it is found the needle punctures are often followed by serious hemorrhage not easily controlled. It is thought safer to resect as many of the ribs as necessary and make a hinge flap so a large part of the lung can be exposed. The only difficulties are hemorrhage and change in the air pressure. The hemorrhage is controlled rather easily by the tampon. It should be drained, care being taken that the drain is not left in too long, as it is found that lung tissue erodes easily. I do not think that any of us would think it wise to attack by surgical procedure the cyst this patient has, looking as well as he does. The operations on the lung are in their prime, and are going to stay in their prime because we cannot get enough help from the internist to tell us where to go in and make the attack. The only time the surgical procedure would become important would be when the patient was getting worse and having a hemorrhage, which was uncontrollable. I do not think the lung will be a very fertile soil for the surgeon's knife in the future, as these patients take anesthesia very poorly, and it is next to impossible to operate on the lung without an anesthetic.

THE bone of contention is generally picked pretty clean.

CASE REPORT.

C. H. SHUTT, M. D.

ST. LOUIS.

Dr. Shutt.—I have a case which is interesting to me, and I thought it might be to you, and the case is reported with the hope that it will bring out some helpful suggestions as to the diagnosis.

The patient is about four months old, and was brought to the hospital a week ago for suspected erysipelas. The mother is healthy, and I believe has borne seven or eight children. There is no family history of hereditary disease, and the living children are healthy; three children are living and three dead, all from accidental causes.

The child has enjoyed good health since birth, and ordinarily takes her nourishment well and her bowels move regularly. At present she has a temperature averaging from 99 F. to 103.5 F., the tongue is heavily coated and there is considerable swelling and inflammation over certain joint areas The affection changes from one to another joint area in from 24 to 36 hours, leaving the first affected, only slightly tender and causing the last affected to be greatly swollen, painful and inflamed. The skin over the affected area becomes very red. When the patient came to the hospital, the area surrounding the left tempero-maxillary joint was affected, and two elevations, tender and red, about 3 cm. in diameter were found over the right posterior occipital region. In 36 hours the redness disappeared from the facial region and the left hand and wrist became affected, wrist and fingers swollen twice the normal size and very edematous and painful. The temperature averaged 101 F. During this attack, baby moderately prostrated and very irritable. The left hand was affected about 36 hours, and then the right hand became involved, the condition of the left hand rapidly assuming the normal. About two days later, the hands were nearly normal and both knees were simultaneously affected.

From the knees the condition advanced to the ankles, and finally into the smaller joints of the feet. In 24 hours time the condition in the feet cleared, and today the trouble seems to have disappeared and the child is very much improved generally. There are no deformities and the tissues are well nourished. The condition about the joints at all times seemed to be very deep-seated and the skin was involved in the inflammatory process by continuity, vesicles did not appear.

I might add that the child's mother is perfectly healthy. I have listened quite often to the child's heart, and so far as I can discern there is no disturbance of the heart. Today the symptoms have almost completely disappeared. This is the first time they have abated. It remains to be seen whether they reappear.

Dr. Falk.—What has been the treatment?

Dr. Shutt.—We have given massage with oil of gaultheria, and have restricted the diet and instituted hygienic measures, baths, etc., mild diuretic and cathartic medicines were employed.

Dr. Luedeking.—Is the condition similar to what we might look for after the use of serum?

Dr. Shutt.—The child has not received any antitoxin and the condition does not resemble an antitoxin urticaria.

Dr. Leudeking.—In the early days of the use of antitoxin, we frequently saw cases with such symptoms.

Dr. Shutt.—The edema was marked and the tissues around the joints were swollen to twice the normal size. This case in its clinical aspects resembles acute articular rheumatism very closely, and although authors say that small children are very seldom sufferers from this disease, it is difficult to make any other diagnosis if the clinical picture is held in mind. Rickets and gout are mentioned as being more probable than rheumatism, but thorough examination fails to disclose a set of symptoms or conditions resembling either of the two conditions.

Dr. Lippe.—As to rheumatism in children we so often overlook that; even men trained in these observations will not diagnose it, because they do not examine the small joints We examine hastily and overlook these things. We examine hastily and do not suspect that it does have rheumatism. It might be well to listen to the heart from day to day.

Seattle After the Fakirs.—The city of Seattle has instituted war against quacks through the medium of her police department. Obscene advertisements have been excluded from the daily papers and many so-called doctors have been denied practice rights for lack of license. The chief of police is using stringent measures and will strive to entirely eradicate the evil. In contradistinction to this state of affairs West Seattle has made an osteopath health officer. It is said to be the first instance of the selection of a member of this cult for such position.

THE MEDICAL FORTNIGHTLY

Issued Tenth and Twenty-Fifth of Every Month.

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EDITORIAL

The Formalin-Permanganate Method of Room Disinfection.

FORMALDEHYDE has established its claim as easily the most valuable disinfectant available, and it is a matter which is of general interest to the profession that methods of liberating the gas have been discovered which obviate the necessity of employing lamps and other contrivances which have hitherto been used. In the July Therapeutic Gazette, Houghton and Clark present some further experiments with the formalin-permanganate method originally presented by G. F. Johnson in 1904, and which consists in adding potassium permanganate crystals to full strength formaldehyde solution in a convenient receptacle placed in the center of the room to be disinfected. Various proportions of permanganate and formaldehyde have been employed, but McClintic, of the Department of Public Health and Marine Hospital Service, as the result of an elaborate series of experiments, has recently reported that the best results are obtained when fifty grammes of potassium permanganate are brought in contact with one hundred cubic centimeters of formaldehyde, or multiples of these quantities, depending upon the space to be disinfected. Within a few seconds to one minute, depending upon the size of crystals used and the temperature of the room, a vigorous reaction ensues, causing strong ebullition of the liquid and producing sufficient heat to liberate a large volume of formic aldehyde gas and water vapor. This boiling continues from four to six minutes, becomes less vigorous, and gradually recedes until nothing remains except the nearly dry residue. Frequently it became thoroughly dry. In the majority of cases, however, this residue consisted of a lower oxide of manganese, a very small amount of formaldehyde, carbon dioxide, potassium hydrate, and some moisture.

In further experiments in an endeavor to arrive at the practical value of the method it was found that when potassium permanganate crystals were added to formaldehyde in the above named proportions, in quantities sufficient to disinfect the ordinary sized living room, very violent ebullition and foaming occurred, causing the material to boil over the sides of the receptacle. In their trials 240 grammes of potassium permanganate crystals were placed in an ordinary three-gallon pail and 480 cc., one pint, of 40 per cent formaldehyde was poured upon them, these quantities being sufficient to disinfect 1600 cubic feet of space.

As the spattering and foaming over the rim of the pail caused by such violent ebullition were, to say the least, very objectionable, measures were adopted to retard the reaction sufficiently to avoid this difficulty. After trying several series of experiments the desired result was successfully accomplished by incorporating with the potassium permanganate crystals 15 per cent of Portland cement and enough water to give the mixture the proper consistency for forming into small briquettes. After making, these briquettes are left until dry, when they can be readily handled.

With potassium permanganate crystals in this compact form, the method becomes very simple and easy of operation. The charge, 480 cc of formaldehyde, is poured into a three-gallon metal pail, and the three briquettes containing 240 grammes of potassium crystals are quickly dropped into the liquid. The reaction ensues more slowly and with less violence than when the crystals alone are used, and is not accompanied by any undesirable foaming or spattering.

The method is so simple and so readily available even in remote communities that its general adoption seems a foregone conclusion.

A Consideration of Hay Fever.

THE annual exodus of sufferers from hay fever is just about to begin, and we are again brought face to face with this most trying affliction. The number of sure specific treatments devised and discovered for this malady is practically equal to the number of failures to accomplish with certainty that which was purposed. In a recent issue of the Journal of the American Association (July 13) Dr. H. H. Curtis exhaustively considers hay fever with the following conclusions: He enumerates four etiologic factors: 1. A neurotic factor or an

adynamic state of the nervous system, and calling for careful search for the cause of nervous irritation and generally a tonic treatment. 2. Pathologic conditions of the nasal mucosa, arising from the presence of polypi, deflections hypertrophies, etc., attention to which may cure the disorder. 3. Lithemic or uric acid states, or intestinal autointoxications, calling for the special treatment for these conditions. 4. Dust, drugs, perfumes, animal emanations and many pollens. Some individual predisposition is evidently essential to the development of hay fever from these causes. The question how much the other above-mentioned causes influence the predisposition to be affected by pollen toxins, etc., is suggested by Curtis, who also discusses the effects of suggestion in the treatment by his extracts of golden rod and ragweed and the pollantin of Dunbar, and publishes the replies of a number of prominent physicians to letters asking their experience with the remedies. These illustrate, he says, the difficulty of obtaining statistics from a number of widely separated experimenters. His own conclusions are given as follows: 1. Hay fever is a disorder amenable to no specific treatment. 2. The number of cases of hyperesthetic rhinitis from other causes than ragweed and other pollens is about one-third of the total number. 3. About one-third of the cases supposed to be due to pollen reaction may be relieved by constitutional and surgical methods of treatment. Predisposition to attack in these cases being due to definite causes, would suggest the theory that induced enervation of the sympathetic is an important etiologic factor. 4. Primary intoxications may take place from pollen toxins in cases in which the sympathetic system apparently is not previously enervated. These cases, theoretically, should react to antitoxin treatment. 5. The consensus of opinion today is against the claims made for pollantin, though observers who have been instructed personally by Professor Dunbar indorse unqualifiedly the great benefit to be derived from the treatment. 6. The suprarenal capsule products hold the first place today in the treatment of hyperesthetic rhinitis. 7. The employment of constitutional treatment as an adjunct to any local application is of supreme importance. 8. The best of all treatments yet found is the climatic, with previous attention to nasal conditions.

To relieve the edema following a hemorrhoid operation, apply a glycerin dressing covered with rubber protective.

Traumatic Nephritis.

A QUESTION that frequently arises in medico-legal cases is the possibility of an acute nephritis occurring as a result of a blow or fall upon the lumbar region. But little is said in the text-books on this question, yet we know that in many cases of laborers falling from ladders or great heights, there is immediately afterwards observed hematuria, albuminuria with casts, even dropsy at times. This condition exists for a time and then disappears. Are we justified in calling such cases acute traumatic nephritis?

A most interesting contribution upon this subject appeared in the July number, 1907, of the Vierteljahrsschrift fuer gerichtliche Medizin, by Dr. Luigi Tomellini, of the Institute for Legal Medicine of Genoa. He attempted to arrive at some conclusion from experimental work upon rabbits. The technique of the work is as follows: rabbits were subjected to direct blows upon the kidneys with hammers, also their kidneys were exposed and squeezed, etc., an attempt being made to approximate the injuries received by man in falling or in being squeezed between various moving bodies. The animals were killed by sharply striking the spinal column, kidneys quickly removed and subjected to fixation and sectioning. Flemming's solution was used in some instances to determine the fatty degeneration if any existed. It may be mentioned that the kidneys in all cases were not always exposed by laparotomy, in some instances only squeezing through the abdominal walls being practised. As a result of a great many experiments, it was determined that a typical interstitial nephritis did not follow trauma of the kidneys. The lesion produced was a circumscribed necrosis of the particular kidney injured, followed by scar formation.

While the author does not attempt to absolutely state that these experiments conclusively prove that in man a trauma could not be followed by an interstitial nephritis, still it is a valuable contribution to the scientific study of the condition. In man, of course, we have as additional complicating factors (if there should be a kidney disease following a trauma) the intoxications, such as alcohol and pre-existing diseases, such as grippe. There is great difficulty in the interpretation of all kidney manifestations in man on this account. The subject is an important one and deserves deep consideration. All injury cases with hematuria or albumiauria should accordingly be watched and studied for some time after the injury in the hope of clearing

up this obscure question. Particularly should a painstaking previous history be obtained. With data of this kind and with more experimental researches, perhaps we may be able to state at some future time whether or not there is actually such an entity as acute traumatic nephritis or chronic traumatic interstitial or parenchymatous nephritis.

THE tuberculosis bill appropriating $50,000 for the completion of the hospital building for the consumptives at Sanitarium near Iowa City, Iowa, has been passed by the legislature. The bill includes an appropriation of $5,000 annually for literature on tuberculosis.

COCAIN SALES IN NEW YORK.—Victory has crowned the efforts of the crusade of local physicians against the sale of cocain. The first druggist convicted under the new city ordinance, which provides that the drug shall not be sold without a physician's prescription was fined $250.

THE NATIONAL MEDICAL ASSOCIATION.—The National Medical Association, comprising physicians, dentists and pharmacists, will meet at Baltimore on August 27, 28 and 29, 1907. The officers are: President, Dr. N. F. Mossell, of Philadelphia; secretary, Dr. John F. Kinney, of Tuskegee, Alabama; chairman of executive board, Dr. P. A. Johnson, of New York; secretary of executive board, Dr. A. R. Collins, of Washington.

THE GREAT PREVALENCE OF TUBERCULOSIS.—Shurly states that possibly seventy per cent of our population is infected at some period of life, but that about four-fifths of the infected recover—most of them perhaps never having known that they had the disease. It may not have progressed beyond the pretuberculous stage—surely not beyond the incipient. Perhaps the lack of energy and will power of the infected is nature's way of compelling rest to diminish expenditures below the food supply. Chittenden's statement that generous feeding induces tuberculosis and cancer, cannot be too strongly condemned. The well fed have a tremendous advantage in the struggle for existence. In view of the undoubted fact proved by Robert Hunter, in his work on Poverty, that a considerable percentage (one-eighth) of our population is chronically underfed—ever on the verge of starvation, or at least, with no surplus or physiological bank account—we can well understand why one-seventh die of tuberculosis. The factor of safety is too small.—Amer. Medicine.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

INTERNATIONAL CLINICS. Volume I. Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott & Co.

This valuable quarterly, under the able editorship of Dr. Longcope, clearly continues to deserve its past reputation as a practical aid to the general medical man, especially to one remote from clinics. The contents of the present volume are in accord with the past policy of the editorial staff to present matters mostly of clinical interest. The list of contributors includes many names of note. The first part of the volume is devoted to treatment. Here the most interesting communication is perhaps that of Prof. Barker, evidently based upon his recent experience in the application of psychic treatment to patients suffering with functional neuroses, and includes a review of experiences of other eminent investigators in a field which is unfortunately not often explored by the profession. Gay contributes a cautious but hopeful critical review of recent advance in the prevention and cure of tuberculosis. Under the head of medicine, two of the original articles are of special interest. Warthin treats the subject of "Enlargement of the Thymus," while Diller carefully considers certain etiological factors in the production of neurasthenia, hysteria and delirium. The most notable article under the head of surgery is perhaps that written by Tuffier, on the opening of the pleural cavity without pneumothorax. The subjects of gynecology, obstetrics, ophthalmology and laryngology are represented by special articles of high merit. About one-third of the book is given to short reviews illustrating the progress of medicine during the year of 1906. These reviews while necessarily brief, are arranged in groups under appropriate headings and present data sufficient to guide one to the original articles of interest. The general appearance of the volume is good. A number of small errors have escaped the scrutiny of the editor.

HISTORY OF OSTEOPATHY AND TWENTIETH-CENTURY PRACTICE. By E. R. Booth, Ph. D., D. O. Cincinnati: Jennings & Graham, 1906.

Those who are interested in osteopathy will find this book commendable, as it gives an interesting narrative of the life of its founder, Andrew Still. The author ridicules the medical profession wherever the opportunity presents itself, which he emphasizes by quoting excerpts from the lay press and other unreliable sources and by the reproduction of satirical cartoons. The reader may judge for himself the scientific value from the follow-

ing quotations: Page 350, under the caption of "The Serum Fallacy" he writes: "That tetanus (lockjaw) has been increased by the use of the serum is now generally conceded." . . "For hydrophobia it is now well known, well demonstrated, and positively proved that fatal cases have doubled since Pasteur's invention. Then, too, we have statistics, coming from all sides, that the mortality from diphtheria has also increased since the introduction of Behring's serums" (Eclectic Medical Jour., June, 1904).

MANUAL OF CLINICAL CHEMISTRY. By A. E. Austin, A. B., M. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tufts College, Boston. Boston: D. C. Heath & Co., 1907.

This small volume, comprising 278 pages, treats the subject in as compact a manner as is compatible with an intelligent understanding. Although this manual is primarily intended for students of medicine, the busy practitioner will find it useful as a laboratory guide in making the various tests essential to a correct diagnosis and successful therapy.

FOOD VALUE OF INDIAN CORN.—Experiments conducted at the Maine Agricultural Experiment Station by L. H. Merrill indicate a high nutritive value for this cereal. Digestion experiments were carried on to determine the absolute and relative digestibility of corn-meal and the other principal corn products, both when used as a simple diet and when forming part of the mixed diet. The degree of utilization of the proteins and the carbohydrates were separately determined, as well as the proportion of available energy as heat of combustion. The carbohydrates are almost completely utilized, while the proportion of protein undigested varied from 5 to 10 per cent. The experiments indicate that these foods become more digestible when eaten with other foods. In general it may be said that the corn products are more digestible than is commonly supposed. Not only their digestibility, but their cheapness and the readiness with which they may be converted into palatable foods suggest a more extended use and entitle them to a much higher place in popular estimation. Similar experiments with chestnuts are reported in the same bulletin. The composition of the dry meat of chestnuts closely resembles that of Indian corn, with, however, a larger percentage of fat. Digestion experiments showed that the nuts were quite digestible, in one experiments showed that the nuts were quite digestible, in one experiment 98.1 per cent of the nutritive constituents being absorbed. The chestnuts were eaten in the form of flour.—Ill. Med. Bulletin.

CORRESPONDENCE

SINCLAIR, ILL., August 3, 1907.

EDITOR OF THE MEDICAL FORTNIGHTLY:

I have just read in the last FORTNIGHTLY the interesting letter of Dr. Albert S. Ashmead, of New York City, criticising my article entitled "A Definition of Life."

I consider it an honor to have so learned a man as Dr. Ashmead comment on my effort in a commendatory manner, even if he does poke a little fun at my "haste," which was somewhat due to a desire to use as little space as possible. I did not cite the autopsy record to actually prove a special point, but merely to show that, as a babe could be developed without a woman's influence, it was reasonable to believe a babe could also be developed without a man's influence, as was the Holy child Jesus, and this is a correct logical inference. I cannot see why the autopsy record, or fact, should appear horrible to a physician or to anyone, although it was certainly unique.

Dr. Ashmead is surely an able and learned man, therefore I appreciate the compliment when he says that "the definition is well enough and in accord with science," and my 'differentiation of soul from spirit is good," and "the use of the term telekinesis is excellent;" and "the definition is a good contribution to the literature of the subject." Such words of commendation coming from such a distinguished man of science and general learning, are of far more weight than many words from a score of average men. Dr. Ashmead is hardly fair, however, in saying I am not religious, because I spoke of a prosy minister putting a boy to sleep. Such evidence is insufficient for his verdict. Even preachers comment upon each other frequently in such a manner. I am glad to affirm that I am striving every day to be correctly religious, and by many hours of daily study of the scriptures am steadily getting more and more into the light of the "mysteries that have been hid for ages." If my learned and esteemed friend, Dr. Ashmead, was not so thoroughly materialistic, and so "all science," I would be glad to talk with him about matters of vast importance, which appertain to all men in the near future. This gospel age is the age for "faith," and but few men are full of it, although they expect children to have faith in their parents, and "we are but children of a larger growth," and there is vastly more difference between Jehovah's knowledge and men's knowledge, than there is between men's knowledge and their children's. Faith can bring knowledge, as many are able to prove by personal experi-

ence; and faith may be based on such knowledge as this: "The heavens declare the glory of God and the firmament showeth his handiwork. Day unto day uttereth speech, and night unto night showeth knowledge. There is no speech nor language where their voice is not heard."—Psalm xix: 1, 2, 3. Solomon says: "Wisdom is the principal thing; therefore get wisdom: and with all thy getting get understanding."—Prov. iv, 7. But it must be distinctly understood that not all of the wisdom is within the limits of science. Science is great, but is only the human objective brain's inductive efforts to understand Jehovah's laws; history is great; but it is only the human objective brain recording events that have transpired, the greatest of which are only the fulfilment of the predicted occurrences called prophecies, though men may differ as to which are greatest. But I do not wish to write distasteful things, nor to lead any one into a realm where they might nor care to walk.

Thanking Dr. Ashmead for his commendatory words and his courtesy, I will respectfully subscribe myself,

W. W. Crane, M. D.

Creosote even though administered in capsules on a full stomach is liable to go to pieces against the stomach wall and cause considerable irritation. It is best given as follows: creosote 1.00, charcoal 2.00, mix and allow to dry for a half hour then put up in konseals and administer on a full stomach.—E. S. McKee, M. D., Lancet Clinic.

State Fair, Sedalia.—Great preparations are being made for the seventh annual exhibition of the Missouri State Fair, October 5-11, 1907. Three new brick barns, practically fire-proof, with a capacity of 150 animals each are being erected. New walks are being laid and the old ones repaired. Larger water mains are laid and extended to all stock barns affording an abundnace of water for live stock, and an increased pressure for extinguishing fire. The main boulevard is being laid with macadam under the supervision of the United States Department of Good Roads, thus furnishing a sample of permanent roadway for the inspection of visitors, built in the most approved and practical manner. Every possible convenience for the comfort and entertainment of visitors is being provided, and the most successful meeting in the history of the institution is assured. The county clerk has premium lists for distribution, or Secretary Rippey at Sedalia will furnish you with full information.

CLINICAL THERAPEUTICS

A forum of original experience, to which scientific contributions are invited. Responsibility for views promulgated imited to author.

THE TREATMENT OF PNEUMONIA.

B. F. FELCH, M. D.

CHICAGO.

Pneumonia is a rheumatic or gouty disease, usually developed by a cold or chill; it is most common in the fall or spring; in the young or the aged. About half of the subjects of rheumatic fever have had an attack of that fever in the lungs, pleura or heart. And some of our most reliable writers say that nearly half of the severe injuries of these organs have been caused by rheumatic fever before the patient was twenty years old.

Pneumonia is quite generally caused by chronic rheumatism or gout, which quite frequently extends to the heart and pleura. All will be relieved by the same rheumatic treatment at the same time, and if treated in its first stage may be aborted in two to four hours.

We give the following treatment: First dose strophanthus one five-minim tablet and two compound strychnine tablets; in ten minutes 30 to 40 grs. salicylate of soda. (In lieu of compound strychnine tablets the patient may be given 1-50 gr. strychnine with strophanthus.) Second dose 15 to 20 gr. salicylate of soda with strophanthus and compound strychnine, as given in first dose. This dose given one hour after first dose of salicylate of soda. Third dose second dose repeated. It might in some severe cases be necessary to repeat the third dose, but rarely. For fourth dose salicin 30 gr. may be given instead of 20 gr. salicylate of soda. We usually after giving three doses of salicylate of soda, unless the fever has subsided the patient breathes easily, give two tablets sal codeia (Bell) after one hour, unless the patient is easy we repeat this dose with strophanthus and compound strychnine tablets, as in first to fourth doses, if needed.

Usually for three days to a week or more it is best to give a full dose of salicylate of soda, that is from 25 to 40 grs. every morning, and three doses of strychnine and strophanthus each day. The patient sometimes needs a little cough syrup the second day, but frequently requires but little medical care after the first three or four hours of treatment. Whether young or old we expect the patient will again return to normal health within a few days. We advise our patients to keep their beds for three to six days and to be careful about exposure to cold. We do

not know any second or third stage of pneumonia, when called during the first, but sometimes you may not see the patient until he is in the second or third stage, what shall be the treatment then? This will depend somewhat upon the condition of the patient. If very weak use a little less salicylate of soda for first dose, otherwise same treatment as heretofore given. Next day in the morning, give 25 to 40 grs. of salicylate of soda and compound strychnine tablets and strophanthus, as heretofore directed, three times a day for a week, with salicylate of soda once a day for a week, or until the patient feels well again. Look out and correct each irregular or defective action of the principal functions of the system.

We have used Parke, Davis & Co.'s strophanthus tablets for a number of years, and they have been very uniform and satisfactory in their action. With each dose of 5 or 10 m. tincture of strophanthus we give two compound strychnine tablets. Formula of compound strychnine tablets: Strychnine 1-100, phosphorus 1-100, ex. cannab. indica 1-16, iron carbonate 1 gr. We have learned to highly prize this compound with strychnine. We prefer salicylate of soda 5 gr. tablets, sugar-coated, manufactured by Wyeth to any other make we have tested. Sal. codeia (Bell) formula, codeine, gr. $\frac{1}{4}$, salacetin grs. 5. We have found these tablets to be satisfactory, and we use them especially after salicylate of soda, to save giving more salicylate of soda than we care to give within a given time. We would say that we have no interest in the manufacture of any medicine on the market, nor any interest whatever in them, except as they contribute to the welfare of the sick.

Whenever the attack of pneumonia is severe make strong camphor, 2 oz., camphor gum to one pint of alcohol; saturate four to six thicknesses of cloth with this camphor, and cover the whole region affected, and apply cloths wrung out of the water on top of this camphor, changing them often, until the patient is easy, his fever gone and breathing comfortable, but do not omit the medicine. There has been much complaint about the action of salicylate of soda and strophanthus among physicians. We are very positive that the failure of these remedies is, first, because of improper doses; second, by giving with them other medicines which would alter their effect; or thirdly, by giving medicines improperly manufactured; and we could cite many such.

RHEUMATISM AND GOUT.

With the desire to shed an additional ray of light upon the subject above discussed We will make a few remarks in regard to rheumatism and gout. Rheumatism may be known as rheumatic fever, chronic rheumatism, nodular rheumatism, rheumatic neuralgia. Gout as classical gout, chronic gout, nodular gout, and gouty neuralgia. These diseases are obscured by a multiplicity of divisions and unmeaning names.

Alexander Haig says that rheumatism is gout, and gout rheumatism; chronic rheumatism and chronic gout are quite similar diseases. The child or youth may have rheumatism, the man past 50 gout. There is scarcely a case of rheumatism in a subject past 52; but generally there is more or less of urate of soda which may show itself in the ears, fingers, toes or other localities. Rheumatism or gout in chronic form may exhibit itself in forty different phases, and may attack almost any fiber from the head to the foot, with or without pain; old people with but slight pain generally, sometimes with merely a weak joint or muscle, frequently middle aged people are affected the same; gouty indigestion without pain, or some eye or skin disease, is very common. Chronic rheumatism and chronic gout are so nearly the same disease that the subject with rheumatism does not know when the change takes place from rheumatism to gout, unless he discovers tophus in his ears, fingers, toes or other locality, then he is sure his rheumatism has become gout. But a subject may have gout for years, and finally die with gout, and still urate of soda may have never been discovered; in fact the greater share of patients with chronic gout, never exhibit urate of soda. It is considered safe and usually advisable to charge every pain of a rheumatic or gouty patient to one of these diseases, and give them rheumatic treatment.

Classical gout, which is gout with fever and severe pain commonly in the big toe, but after the first attack may be located in another joint or joints. It is supposed to be caused by over-eating, drinking strong beer or ale and wines—doubtless this in many cases is correct—yet in fact three-fourths of the gout is passed to its possessor by his ancestors. The child, youth, and the adult, may have rheumatism until about 50 years of age, after which gout, and is liable to have gout at any age beyond thirty, but very seldom before. Gout deforms and perplexes old age; urates accumulate that should be excreted as fast as formed, but as life advances they continue to accumulate with greater and still greater facility. The eyes of the old become dim, their hearing defective, sometimes deaf and blind, and ofttimes decrepit.

Longstreth says: "The joint and muscles stiffen and ache the world over."

Give old people the above treatment, cause them to excrete their urates, persist in this treatment, and the wheels of time may be turned back; but for want of sufficient persistence and punctuality in taking medicine they do not renew life, they would certainly pass along with less perplexity and more comfort.

Classical gout is quite similar to rheumatic fever. In rheumatic fever the subject will excrete lactic acid; in gout no lactic acid, but uric acid crystals will be found in his urine, and perhaps urate of soda in his big toe. The pain and discomfort in these two diseases may be very severe and quite similar, except the excessive sweating of lactic acid in rheumatic fever. Classical gout is rare in America, but chronic gout very common, and is talked of and regarded as rheumatism.

Classical gout is an ancient disease, about as old as time. Human bones in the most ancient sepulchers have been discovered with urate of soda around the second phalange of the big toe. We read in II Chronicles, commencing with the twelfth verse: "And Asa in his thirty and ninth year of his reign was diseased in his feet, until his disease was exceedingly great, yet in his disease he sought not the Lord, but the physicians. And Asa slept with his fathers, and died in his one and fortieth year of his reign."

RECUMBENCY IN THE TREATMENT OF INFANTILE PARALYSIS.

ADONIRAM B. JUDSON, M. D.

NEW YORK.

In the ever-changing treatment of disease the influence of environment is receiving unusual attention, as is seen in the management of tuberculosis of the joints. The influence of the lapse of time is also better understood. Medicines are given in small doses for very long periods, and the effects of time on the body are more clearly seen to influence the course of disease and the action of remedies. In the treatment of infantile paralysis I propose a method which relies exclusively on the influences of environment and the lapse of time. It is applicable only in the very early stage, before the case is likely to be seen by an orthopedic surgeon. As soon as the disease is recognized I would limit the patient to the recumbent position of there is no possibility of further recession till the paralysis. The period of spontaneous recession extends over several months. During this time the difficult task must be undertaken of keeping a child, well in every other way, off his feet at an age when he should be learning to walk. In some cases eighteen months should be occupied in this way. The common belief that such a patient requires exercise, especially of the affected limbs, will give rise to criticism and objections. A simple argument will not prevail in the family circle, and the physician's word will hardly prevent the little patient from having many a romp. And when the case ends there will be differences of opinion. If some lameness results, it may be said that the patient should have had more exercise, and if there is no disability at all, after the strict observance of recumbency, it may be said that there had been very little the matter with the child.

The argument is as follows: It will be recalled that the ill effects of joint disease are seen more commonly in the lower extremities than the upper because tuberculous action is subject to resolution in the epiphyses of the shoulder, elbow and wrist, but often goes on to destruction of the articulating surfaces of the hip, knee and ankle. And when it is noted that the arms are free while the legs bear the weight of the body it is reasonably inferred that the joints of the lower extremities when affected, or even suspected, should be protected by either recumbency or appropriate apparatus. The conclusion is a plain proposition and needs no discussion or verification. It shares the simplicity of Jenner's argument when he traced the relation of cause and effect and prescribed vaccination. In another field Finlay, walking with his eyes open, apprehended the relation of cause and effect and prescribed the sequestration of the mosquito

The necessity of reforming the environment of the lower extremities having been derived from clinical observations of joint disease, can practical conclusions be drawn in a similar manner from observing the course of infantile paralysis? Disability from this disease is seen eight times as often in the lower as in the upper extremities, and yet in the early stage the paralysis is found in all parts of the motor nervous system. The muscles of the recumbent patient are in very moderate use and in a position entirely favorable to spontaneous recession of the paralysis. The arms and hands retain this advantage when the patient is erect, but the impaired muscles in the legs and feet give way at once when they meet the resistance of the weight of the body. They rapidly become elongated and attenuated, and could not well be placed in an attitude more destructive of the possibility of restoration.

When prescribed recumbency shall give to all parts the same environment, recession of paralysis will be equally encouraged in the lower and upper limbs, the disproportion of 8 to 1 will disappear, and the sum of deformity from this disease will be materially reduced.

The value of the method is thus proved, but it is not readily demonstrated. When comparing methods it is not easy to show that one is better than another. It may always be said that a case cited in behalf of a certain method may have been one that would have done well under any treatment. Tables of carefully recorded cases might lead to correct estimates, but studies of this kind are difficult and have not escaped criticism. Dr. Gaillard Thomas said with wit and wisdom, that if there is anything more misleading than facts it is figures. Medicine and surgery are still outside of the realm of exact science. Therefore we welcome every logical and reasonable resource of prevention and treatment.

Passive motion, resistance exercises, electricity, massage, local applications and judicious medication should be continued. They cannot interfere with the treatment proposed, and their observance may make it easier persistently to maintain recumbency, the most important agent of all.

Medical Editors' Meeting.—At the annual meeting of the American Medical Editors' Association, held in Atlantic City last month, the following officers were elected: Charles S. Taylor, Philadelphia, Medical World, president; Kenneth W. Millican, St. Louis, St. Louis Medical Review, first vice-president; H. Edwin Lewis, New York City, International Journal of Surgery, second vice-president; Joseph McDonald, Jr., New York City, American Journal of Surgery, secretary-treasurer. Wallace C. Abbot, Chicago; William A. Young, Toronto, and David C. English, New Brunswick, New Jersey, executive council.

Tennessee's penitentiary will have a tuberculosis hospital. For many years it has been apparent that there should be a separate hospital for the tuberculosis patients at the State prison, and prison physician Head has repeatedly recommended such an institution. The matter has been forcibly brought to the attention of the board within the past few days and it was finally decided to delay the matter no longer, but to begin at once the construction of the building. It is proposed to erect the building within the walls of the prison.

SOCIETY PROCEEDINGS

MEDICAL SOCIETY OF THE MISSOURI VALLEY.

The twentieth annual meeting of this association will be held in the city of Council Bluffs, on September 5th and 6th, under the presidency of Dr. O. Beverly Campbell of St. Joseph. Invitations have been extended to the presidents of the various State associations within the province of this society, as well as to other distinguished men in the profession.

It is the desire of the officers to make this meeting a record-breaker in point of attendance, and with the advent of the two-cent fare throughout the West (which amounts to the usual excursion rate of one and one-third fare for the round trip) it is believed this will be accomplished.

The arrangements are in the hands of a committee, of which Dr. Donald Macrae is chairman, and entertainment will be provided by the Carnival Company, which has extended a cordial invitation to our society.

The scientific program will be fully up to the usual high standard, which is evidenced by the following list of papers already promised:

1. Habitual Constipation, J. C. Waterman, Council Bluffs, Ia.
2. The Sane Type of Insanity, S. Grover Burnett, Kansas City, Mo.
3. The Malignant Growth of the Testicle, William Jepson, Sioux City, Ia.
4. The Diagnosis of the Presentation and Position in Obstetrics, Charles W. Pollock, Omaha, Neb.
5. Alkaloids versus Galenical Preparations, A. L. Muirhead, Omaha, Neb.
6. Tonsillectomy versus Tonsillotomy; and a Simple Technique, David C. Hilton, Lincoln, Neb.
7. Cardio-vascular Complications following Operations, LeRoy Crummer, Omaha.
8. Toxemia of Pregnancy, Elbert E. Fisher, Rodney, Ia.
9. Educational Hygiene, S. R. Towne, Omaha, Neb.
10. Squint and Its Relation to the General Practitioner, Llewellyn Williamson, St. Louis.
11. Orthopedic Surgery in General Practice, James W. Cokenower, Des Moines, Ia.
12. Should the Uterus be Removed when Operating for Disease of the Adnexa? if so, When and by What Technique? J. E. Summers, Jr., Omaha.
13. Are We of Necessity Largely Symptomologists in the Treatment of Diseases? C. B. Hardin, Kansas City, Mo.

14. Cyst and Gumma of the Cerebellum, Leo M. Crafts, Minneapolis, Minn.

15. Psychotherapy—Its Why and How, R. J. Midgley, Omaha, Neb.

16. Title not announced, A. C. Stokes, Omaha, Neb.

The Grand Hotel will, as usual, be headquarters, and on account of fair week all members should make reservation of rooms without delay to avoid disappointment.

CHAS. WOOD FASSETT, Secretary.

TRI-STATE MEDICAL SOCIETY.—The annual meeting of this society will be held in Moberly, Mo., Tuesday and Wednesday, September 24 and 25, 1907, under the presidency of Dr. C. F. Wahrer, of Fort Madison, Iowa.

THE SPIRIT OF THE MEDICAL PRESS.

THE PHYSIOLOGIC STUDY OF MIGRAINE.—While migraine has been studied from the therapeutic standpoint, not much work has been done from the physiologic side. Much could probably be done by such study. The material for such studies is plenty.—Jour. A. M. A.

THE SPONTANEOUS HEALING OF CANCER.—Cannot be denied at the present time that it is possible for cancer to undergone spontaneous healing. Local treatment has occasionally been followed by natural healing. On the other hand, operative treatment may have the opposite effect—that of adding fuel to the flame of malignancy.—Jour. A. M. A.

PRACTICAL SCIENTIFIC WORK.—The work recently done by Reid Hunt on the action of acetonitrile while at first apparently of academic interest only, has turned out to be of great practical importance. This is true of many of researches that appear to be of theoretic interest only. The need of greater cooperation between the research laboratory worker and the clinician.—Jour. A.M.A.

A "FINGER PHENOMENON" IN HEMIPLEGIA.—Souques describes a phenomenon which he calls the "phenomenon of the interossei," which he observed in patients with hemiplegia. It is not present in complete hemiplegia; there must be some ability to raise the arm voluntarily. When the arm is raised the fingers of the corresponding hand are involuntarily extended and separated. As the arm is allowed to drop the fingers slowly resume their former position. The phenomenon is dependent on a disturbance of the pyramidal tract.—N. Y. Med. Jour.

PANCREATIC ENZYMES IN TREATMENT OF CARCINOMA.—The results of the recent researches of Ball and Thomas are not favorable to the employment of injections of trypsin in the treatment of carcinoma. Careful investigations lead them to believe that the course of cancer both as a disease and as a morbid process is unaltered by the administrations of the pancreatic enzymes.—N. Y. Med. Jour.

VENEREAL DISEASES AMONG SAILORS.—The life of a sailor is such that he is naturally prone to fall into the clutches of the prostitute. In a seaboard city like New York over a million sailors make the port annually, about 10 per cent of whom, according to statistics, have venereal disease. In these days of serious effort to limit the spread of venereal disease there seems to be need of establishing, in large maritime towns, special institutions for the treatment of sailors with acute venereal disease.—N. Y. Med. Jour.

LEUCOCYTE COUNTING FROM STAINED SMEARS.—The amount of time consumed in making the Thoma blood count has led many observers to suggest methods of making the blood count by means of smears. Larrabee, who has investigated the subject, found that smears gave an average error of 30 per cent; plus error average, 36 per cent, average minus error, 26 per cent. Such a percentage of error justifies one in retaining the slower method of Thoma.—N. Y. Med. Jour.

THE FUTURE OF THE TROPICS.—As the diseases of the tropics are brought under control the question arises as to whether the center of civilization will not shift to the equatorial regions. Col. Gorgas is of the opinion that it will. It is doubtful, however, whether the white man can retain his stamina through many generations of residence in the tropics. The productiveness of tropics is a drawback, as it tends to destroy ambition.—Jour. A.M.A.

THE MOST IMPORTANT FACTOR IN INFANT MORTALITY.—While we hear much of the dangers of milk, of crowded tenements, of long-continued heat and uncleanly quarters and garbage accumulation, as factors in modern infant mortality the most important and most frequently overlooked is the failure of mothers to nurse their children. There is no substitute for mother's milk. The tendency of physicians to find excuses for women for not nursing their children is greatly to be deprecated, and the instruction of mothers as to their maternal obligations is a serious duty that the medical profession should perform.—Jour. A.M.A.

THE MEDICAL FORTNIGHTLY

A Cosmopolitan Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scientific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

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The Medical Fortnightly will not be discontinued at expiration of ubscription, as many of our readers prefer not to have their files broken on account of failure to remit. Unless we receive a distinct request to discontinue, and payment for all arrearages, this magazine will not be discontinued.

Subscriptions may begin at any time; volumes end with June and December.

Contributors should understand that corrected typewritten copy is essential to clean proof and prompt publication, and is much more satisfactory than manuscript. Original articles should be as condensed as justice to the subject will allow.

Editorial offices in St. Louis and St. Joseph, where specimen copies may be obtained, and subscriptions will be received.

Contributions and books for review should be addressed to the Managing Editor, 319 and 320 Century Building, St. Louis, Mo.

FAVORITE PRESCRIPTIONS

ULCERATIVE STOMATITIS.— Forchheimer (Prophylaxis and Treatment of Internal Diseases) recommends the following:

℞ Potassium chlorate..... ½ drachm
Simple syrup..... ½ ounce
Water..... 1½ ounces

M. Sig.: One-half to one teaspoonful every two hours.

LEAD COLIC.—

℞ Powd. opium ..... gr. ¼
Ext. belladonna..... gr. 1/12

One such pill every two hours for twenty-four hours.

At the same time, the following purgative should be given and repeated in twelve hours:

℞ Sodium sulphate..... ℥iv
Magnesium sulphate.....
Syr. raspberry.....aa ℥j
Aq ..... ℥vij

—Merck's Archives.

ANTISEPTIC LIQUID SOAP.—

℞ Saponis mollis.....
Katharmon .....
Aquae..... ℥iv
Alcoholis ..... ℥iij
Misce et adde.
Acidi carbolici..... ℥j

FOR SCABIES.—

℞ Sulphur sublimed..... 2 drachms
Oil of cade..... 2 drachms
Prepared chalk..... 2½ drachms
Green soap..... 1 ounce
Lard..... 1 ounce

M. Ft. unguentum. Sig.: Apply to affected parts.—Bulkley, Med. Rev. of Rev.

OINTMENT FOR PRURITUS ANI.—

℞ Phenol..... gr. xx
Calomel..... ℥j
Tar..... ℥j
Menthol ..... gr. x
Zinc oxide, very fine..... ℥j
Petrolatum ..... ℥vj
Lanolin ..... ℥ij

Bathe with water as hot as can be borne and apply twice daily.—Critic and Guide.

SCARLET FEVER.— Early in the disease Wiest begins to give the following:

Tr. digitalis (fresh)..... ℥ss
Liq. ammon. acetatis (fresh)... ℥iss
Spt. etheris nitrosi..... ℥ij
Syr. tolutani ..... ℥ss
Aquae cari..... ℥ss

M. Sig.: Teaspoonful every three hours.

For the itching, Shollenberger uses an ointment having this composition:

Menthol..... gr. x
Ung. zinci oxidi..... ℥ss
Lanolini, q. s. ad..... ℥ss

M. Sig.: Apply locally.—Med. Record.

THYMOL 1-4000 will keep cocaine solutions. Acetanilide 1-5000 will keep peroxide of hydrogen solutions.—E. S. McKee, Lancet-Clinic.

FRANCE is consuming more tea every year, and the following figures representing the importation into that country reveal the increase. In 1882 the imports of tea amounted to 1,045,500 pounds; in 1892, 1,452,000 pounds; 1900, 2,404,600 pounds; 1904, 2,441,000 pounds; 1906, 2,512,400 pounds.

SOLUBLE IODINE.—The following mixture is soluble in water in any proportion and makes a stable compound: Iodine 6, glycerine 25, water 75. Mix this solution with water in a bottle in the proportion of one to seven or a drachm to an ounce, and a teaspoonful of this will represent a half a grain and should be taken in at least a half a glass of water.—E. S. McKee, Lancet-Clinic.

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MEDICAL MEMORANDA.

Spinal Cord Complications of Anemia.—With increased knowledge of the anatomy and physiology of the brain and spinal cord, there is a growing opinion among careful clinical observers that many of the nervous phenomena accompanying general anemia can be directly attributed to resulting changes in the nervous system. The spinal cord complications of pernicious anemia have been recognized for some time, and it is no uncommon thing in these cases to find pronounced degenerative areas throughout the cord. The posterior columns and occasionally the lateral are most often involved, the nerve fibres being chiefly affected, without however, the extreme shrinking usually observed in locomotor ataxia. While there can be no doubt that these conditions depend to a certain extent on the blood changes incident to the anemic process, it is more than probable that the toxins resulting from the attending hemolysis exert direct injury on the nerve cells.

Fortunately the ordinary anemias are not attended by such extreme changes, and the resulting symptoms, with their speedy control under appropriate treatment, point to a functional rather than an organic origin. These symptoms, while extremely variable, usually consist of constant and pronounced backaches, especially in the cervical and dorsal regions, sensitive areas along the spinal column, variations in the spinal reflexes, paresthesias generally, and often times irritability of the anal or vesical sphincters. Headache is frequently complained of, although the patient is usually able to sleep. The symptoms referable to the sexual function are also extremely variable, especially in the female, and range all the way from absolute frigity to positive nymphomania.

Frequent reference is made to the heart by these anemic patients, and while their symptoms may be somewhat due to the changes in the blood current, there can be no question that the sympathetic nerves suffer in the general involvement of the nervous system, and may therefore be directly responsible for the arythmia, tachycardia, etc., so often complained of. The great therapeutic value of pepto-mangan (Gude) is well shown by its rapid and pronounced action in these cases of anemia complicated by nervous derangements. With the rise in hemoglobin and the blood count, which immediately follows the administration of pepto-mangan (Gude), the backaches and headaches cease, the sensory disturbances disappear, and the patient's nervous system rapidly returns to the normal. The comparative ease with which these cases are restored to health when thus treated, will be exceedingly gratifying to the zealous practitioner. He, more than anyone else, realizes the danger of letting young females thus afflicted drag along indefinitely, for he knows that the psychic influence of long continued sensory disturbance is extremely prone to develop and magnify any hysterical tendencies however latent. Early and efficient treatment is therefore not only desirable but urgently necessary, and pepto-mangan (Gude) will never prove disappointing.

The Future of Medical Journalism.—Dr. James Evelyn Filcher, of Carlisle, Pa., predicts great usefulness for the medical journals of the future. There will be an advance in fuller appreciation of the duties, responsibilities, and opportunities of the medical editor. Combination of the editors into a society with broad affiliations will aid this improvement. The medical journal is the text-book of the physician today. There is a demand for the restricted special journal at the present time, and such journals will be evolved to satisfy the need. Another chief factor in the medical journalism of the future may be the product of a private publisher or a public endowment; this is the journal of original research, with its staff of men continually carrying out researches in various directions.—Med. Rec., July, 1907.